



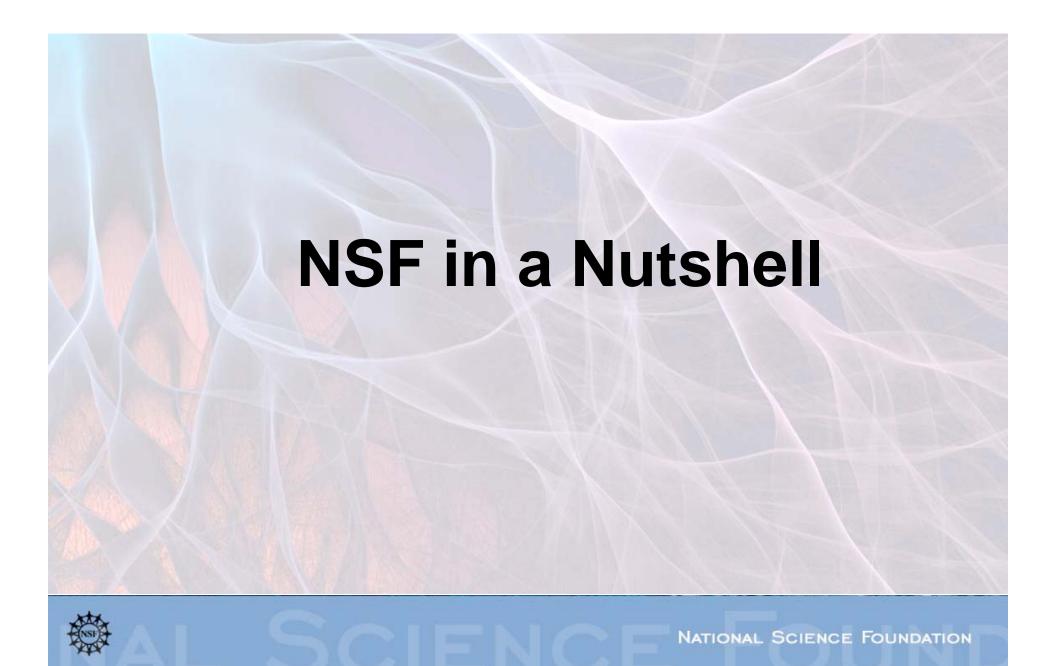
Spring 2006



Main Topics

- → NSF In a Nutshell
- → FY 07 Budget Update
 - American Competitiveness Initiative
- → Current Proposal, Award and Funding Trends
- → NSF Proposal/Award Policy & Procedural Update
- → Electronic Initiatives Update



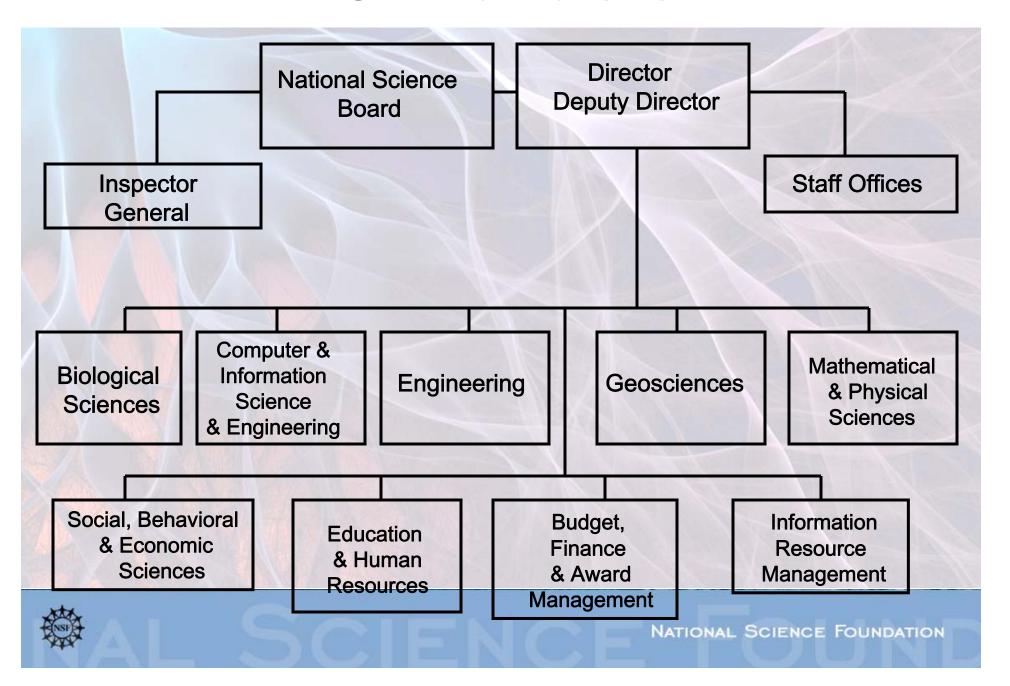


NSF in a Nutshell

- → Independent Agency
- → Discipline-based structure
- → Supports basic research & education
- → Cross-disciplinary mechanisms
- → Uses grant mechanism
- → Use of Rotators/IPAs
- → Low overhead; highly automated
- → National Science Board



NSF in a Nutshell



NSF: Recent Personnel Changes

- → Kathie Olson became Deputy Director in August 2005
- Dr. Thomas Weber named Director of the Office of International Science & Engineering (OISE)
- Dr. Richard Buckius, Division Director of the Chemical and Transport Systems, serving as Acting Assistant Director for the Engineering Directorate
- David Lightfoot named Assistant Director of Social, Behavioral and Economic Sciences (SBE)
- James Collins of Arizona State University named Assistant Director of Biological Sciences (BIO)
- Dr. Judith Sunley serving as Acting Assistant Director for the Mathematical & Physical Sciences Directorate (MPS)
- Search for new EHR Assistant Director ongoing
- Dr. Daniel Atkins named Director of the newly created Office of Cyberinfrastructure



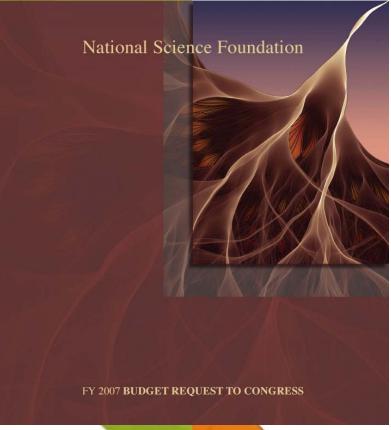
The NSF FY 2007 Budget

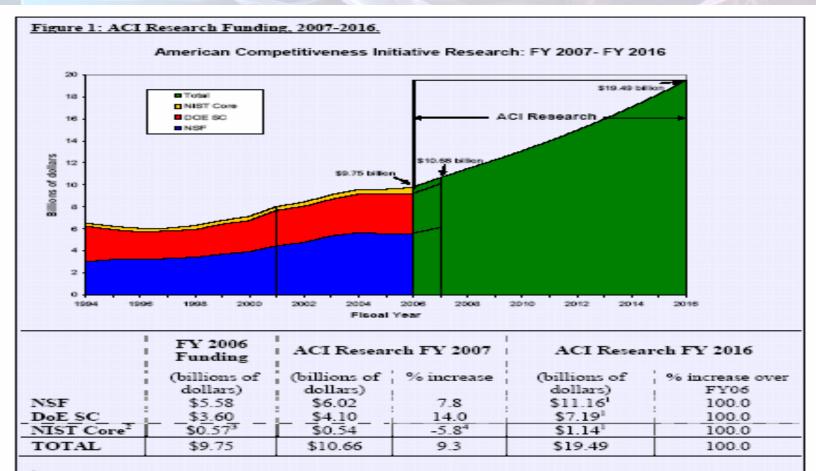


President's American Competitiveness BUDGET Initiative

Double the NSF budget over 10 years







ACI doubles total research fund; individual agency allocations remain to be determined.

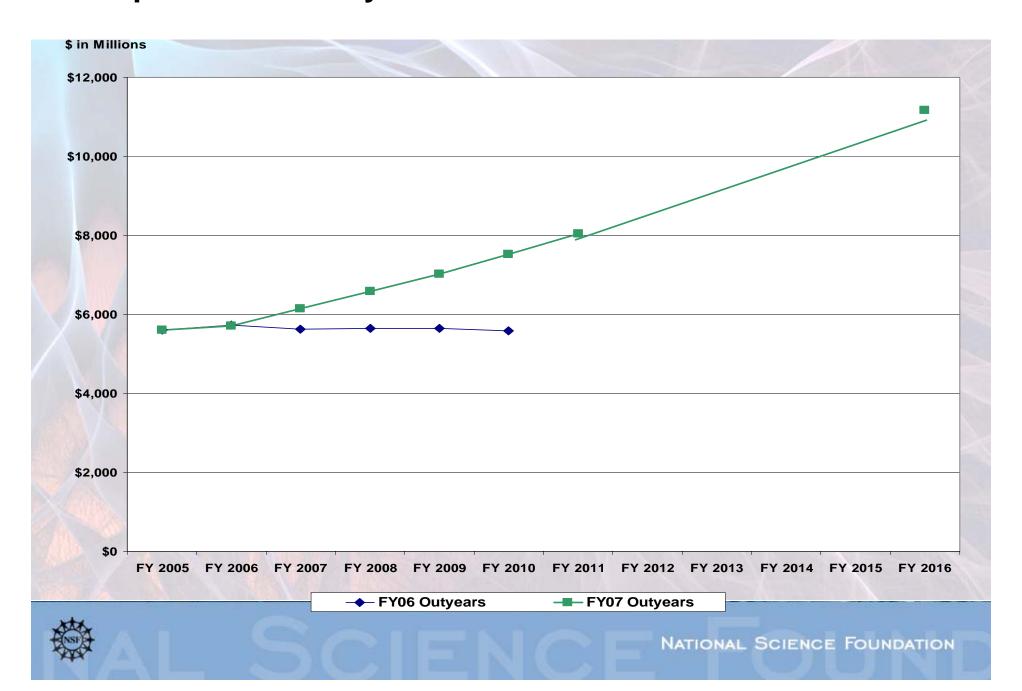


NIST core consists of NIST lab research and construction accounts.

³ The 2006 enacted level for NIST core includes \$137 million in earmarks.

⁴Represents a 24 percent increase after accounting for earmarks.

Proposed NSF Outyear Estimates - FY 2006 and FY 2007



- → Boost physical sciences
- More attention to math and science education in public schools
- Focus on applied energy research
- Make the Research and Experimentation Federal tax credit permanent
- → But:
 - Flat lines NIH for next 5 years
 - Freezes NASA spending on earth and space sciences



→ Haves:

- Double over 10 years:
 - DOE Science Programs
 - NSF
 - NIST core programs
- DHS: + \$18 M for research in nuclear detection and forensics
- DOEd: invest \$326 M total in Math and Science Education (+ 51 %)



→ Have Nots:

- NIH: + 1 %
 - Some few winners:
 - + \$110 M for biodefense fund
 - + \$ 49 M for initiative on genes, environment and health
 - + \$ 15 M for new bridge award for young investigators
- NASA: +1%
 - A host of science missions being placed on hold including:
 - The space interferometry telescope
 - A probe to search for Earth-like planets
 - Space craft to measure global precipitation
- EPA: 6.7 % in the S&T account
- NOAA: \$279 M



NSF FY 2007 Budget Request Total

2007 BUDGET REQUEST

\$6.02 billion

(Increase from FY 2006: \$439 million, 7.9%)

NSF FY 07 Budget Request:

http://www.nsf.gov/about/budget/fy2007/



NSF FY 2007 Budget by Account (millions)



Appropriations Account	FY 2007 Request	Change over FY 2006		
Research & Related Activities	\$4,666	\$3 34 7.7%		
Education & Human Resources	\$ 816	\$ 20 2.5%		
Major Research Equipment & Facilities Construction	\$ 240	\$ 50 26.0%		
Salaries & Expenses	\$ 282	\$ 35 14.2%		
National Science Board	\$ 4	(\$.04) (1.0%)		
Inspector General	\$ 12	\$.5 4.4%		
TOTAL, NSF	\$6,020	\$4 39 7.9%		

Networking and Information Technology Research and Development
\$904 million

Cyber Trust \$35 million

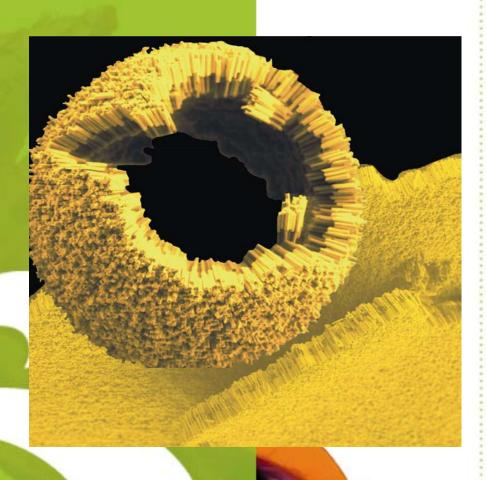




National
Nanotechnology
Initiative
\$373 Million

Nanoscale interdisciplinary research teams \$65 million





Climate Change Science Program

\$205 Million



2007 BUDGET REQUEST

Credit: Peter Michaud, Gemini Observatory



Sensors for the Detection of Explosives



2007 BUDGET REQUEST



\$20 million

Credit: Mete Sozen and Julio Ramirez, Purdue University School of Civil Engineering

International Polar Year 2007-2008

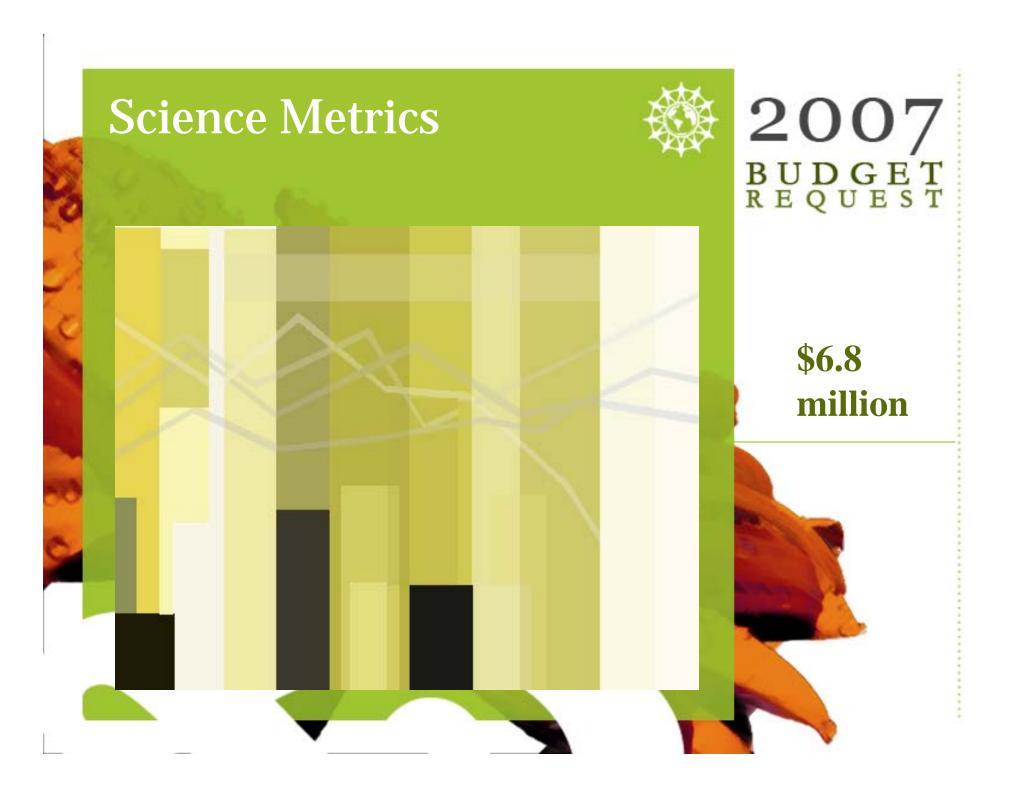


2007 BUDGET REQUEST



\$62 million

Michael Van Woert, NOAA

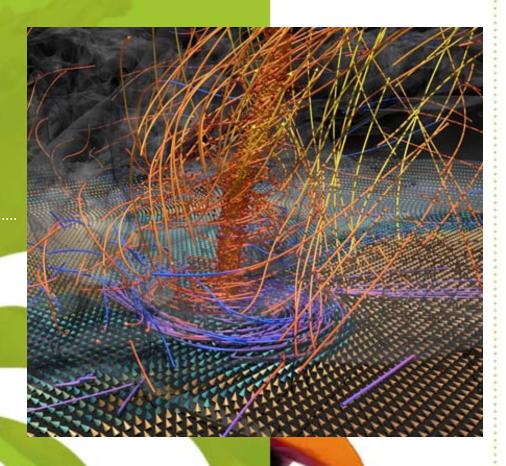


Cyberinfrastructure \$597 million



2007 BUDGET REQUEST

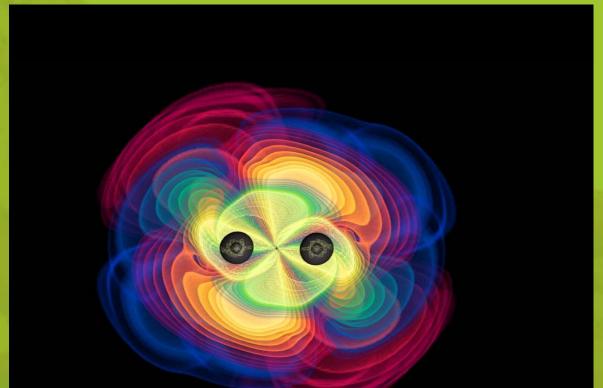
Petascale Computing \$50 million



Credit: Bob Wilhelmson, NCSA and the University of Illinois at Urbana-Champaign; Lou Wicker, National Severe Storms Laboratory, National Oceanic and Atmospheric Administration; Matt Gilmore, Lee Cronce, Department of Atmospheric Sciences, University of Illinois. Visualization by Donna Cox, Robert Patterson, Stuart Levy, Matt Hall, Alex Betts, NCS/

Elementary Particle Physics





2007 BUDGET REQUEST

Increase: \$15 million

Plant Genome Research



2007
BUDGET
REQUEST



\$101 million

Credit: Susan R. McCouch, Cornell University

NSF FY 2007

Budget Priorities

Broadening participation in the science and engineering enterprise

\$640 million





Broadening participation in the science and engineering enterprise



2007 BUDGET REQUEST

Louis Stokes Alliances for Minority Participation (LSAMP)

Alliances for Graduate Education and the Professoriate (AGEP)

Centers of Research Excellence in Science and Technology (CREST)

EPSCOR



NSF FY 2007 Budget Priorities



2007 BUDGET REQUEST

Providing worldclass facilities and infrastructure

\$1.7 billion



Major Research Equipment & Facilities Construction (millions)



MREFC	FY 2007
ALMA	\$47.9
EarthScope	\$27.4
IceCube	\$28.6
NEON	\$12.0
SODV	\$42.9
ARRV	\$56.0
OOI	\$13.5

ARRV



2007 BUDGET REQUEST

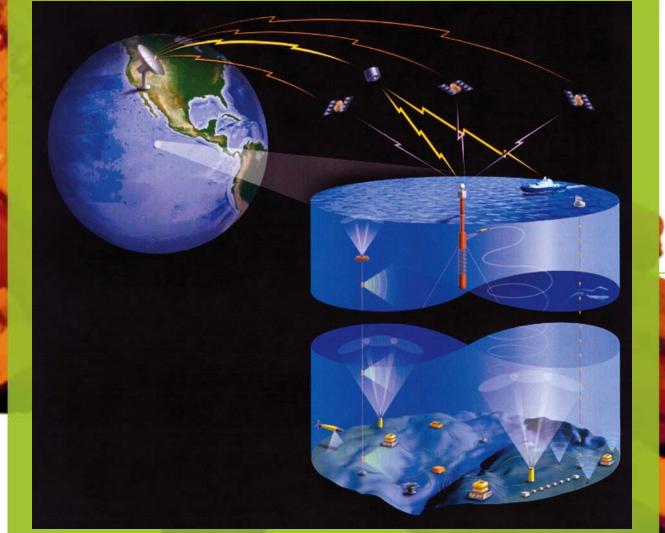
\$56.0 million

The Glosten Associates, Inc.

OOI



2007 BUDGET REQUEST



\$13.5 million

Orcutt, Scripps Institute of Oceanography

Bolstering K-12 Education

2007 BUDGET REQUEST

Discovery Research K-12 DR-K12: \$104 million Grand Challenges

Developing effective science and mathematics assessments for K-12

Improving science teaching and learning in the elementary grades

Introducing cutting-edge discoveries into K-12 classrooms



Bolstering K-12 Education

鏺

2007 BUDGET REQUEST

Graduate Teaching Fellowships in K-12 Education (GK-12)

1000 Fellowships

\$56 million

10% increase



Research and Related Activities by Directorate

(Dollars in Millions)

		FY 2006		Change over	
	FY 2005	Current	FY 2007	FY 20	006
	Actual	Plan	Request	Amount	Percent
Biological Sciences	\$576.78	\$576.69	\$607.85	\$31.16	5.4%
Computer and Information Science and Engineering	490.20	496.41	526.69	30.28	6.1%
Engineering	557.09	580.92	628.55	47.63	8.2%
Geosciences	697.17	702.83	744.85	42.02	6.0%
Mathematical and Physical Sciences	1,069.36	1,085.45	1,150.30	64.85	6.0%
Social, Behavioral and Economic Sciences	196.80	199.91	213.76	13.85	6.9%
Office of Cyberinfrastructure	123.40	127.12	182.42	55.30	43.5%
Office of International Science and Engineering ¹	43.38	34.52	40.61	6.09	17.6%
U.S. Polar Research Programs	278.27	322.68	370.58	47.90	14.8%
U.S. Antarctic Logistical Support Activities	70.26	66.66	67.52	0.86	1.3%
Integrative Activities	130.92	137.12	131.37	-5.75	-4.2%
Arctic Research Commission	1.19	1.17	1.45	0.28	23.9%
Total, Research and Related Activities	\$4,234.82	\$4,331.48	\$4,665.95	\$334.47	7.7%

Totals may not add due to rounding.

¹ OISE FY 2005 Actual includes \$9.42 million provided to NSF by the U.S. Department of State for an award to the U.S. Civilian Research and Development Foundation.

Education and Human Resources Funding by Division

(Dollars in Millions)

EV 2005	FY 2006		Change	e over		
EV 2005			Change over			
1 1 2003	FY 2005 Current FY 2007			FY 2006		
Actual	Plan	Request	Amount	Percent		
\$93.35	\$98.72	\$100.00	\$1.28	1.3%		
238.76	215.16	215.00	-0.16	-0.1%		
237.52	211.71	196.80	-14.91	-7.0%		
154.75	153.02	160.57	7.55	4.9%		
119.16	118.08	143.85	25.77	21.8%		
\$843.54	\$796.69	\$816.22	\$19.53	2.5%		
	\$93.35 238.76 237.52 154.75	Actual Plan \$93.35 \$98.72 238.76 215.16 237.52 211.71 154.75 153.02 119.16 118.08	Actual Plan Request \$93.35 \$98.72 \$100.00 238.76 215.16 215.00 237.52 211.71 196.80 154.75 153.02 160.57 119.16 118.08 143.85	Actual Plan Request Amount \$93.35 \$98.72 \$100.00 \$1.28 238.76 215.16 215.00 -0.16 237.52 211.71 196.80 -14.91 154.75 153.02 160.57 7.55 119.16 118.08 143.85 25.77		

Totals may not add due to rounding.

¹ FY 2005 Actual and FY 2006 Current Plan reflect proposed FY 2007 structure of programs. See text for additional detail.

² Excludes \$25.95 million in obligations in FY 2005, and an estimated \$100.0 million in FY 2006 and FY 2007 from H-1B Nonimmigrant Petitioner Fees.



Major Research Equipment and Facilities Construction (MREFC) Account

(Dollars in Millions)

			(= = = = = =	,				
		FY 2006						
	FY 2005	Current	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012
	Actual	Plan	Request	Estimate	Estimate	Estimate	Estimate	Estimate
Ongoing Projects								
ALMA	49.30	45.14	47.89	47.07	37.37	20.98		
EarthScope	44.80	46.40	27.40					
IceCube	48.10	46.25	28.65	22.38	11.33	0.95		
NEON			12.00	12.00	20.00	30.00	26.00	
SODV	6.08	53.09	42.88					
SPSM	16.86		9.13					
DOJ Judgment			3.00					
New Starts								
ARRV			56.00	42.00				
OOI			13.50	48.00	77.00	78.00	53.00	40.00
AdvLIGO			_	28.48	42.81	46.31	36.25	22.90
Totals	\$165.14	\$190.88	\$240.45	\$199.93	\$188.51	\$176.24	\$115.25	\$62.90



National Science and Technology Council Crosscuts

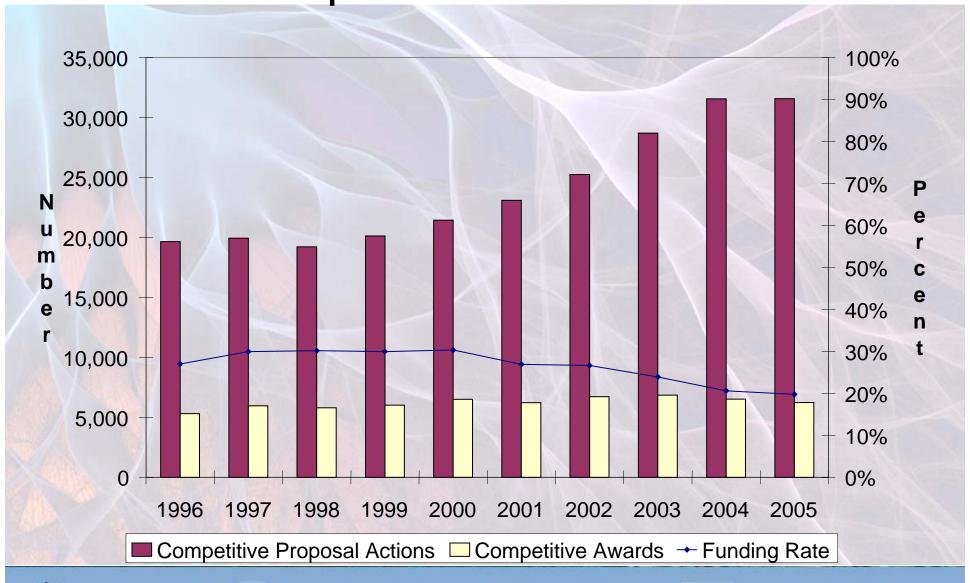
(Dollars in Millions)

	FY 2006			Change over			
	FY 2005	FY 2005 Current FY 2007			FY 2006		
	Actual	Plan	Request	Amount	Percent		
National Nanotechnology Initiative	\$334.99	\$343.77	\$373.18	\$29.41	8.6%		
Climate Change Science Program	197.88	196.88	205.25	8.37	4.3%		
Networking and Information Technology	810.67	810.33	903.74	93.41	11.5%		
Homeland Security	341.40	341.82	384.21	42.39	12.4%		

Current Proposal, Award and Funding Trends

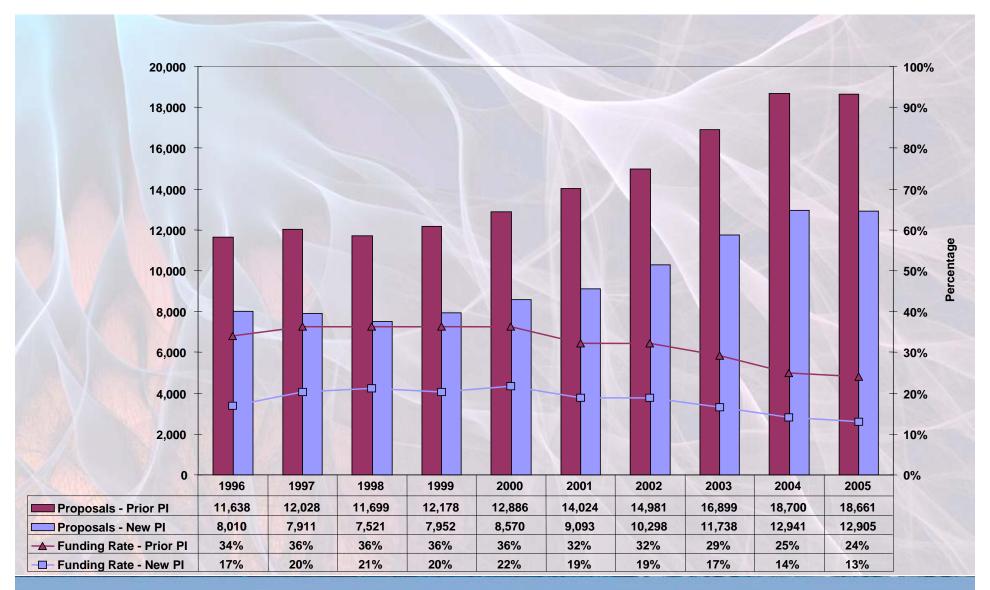


NSF Funding Rate for Competitive Awards Competitive Research Grants



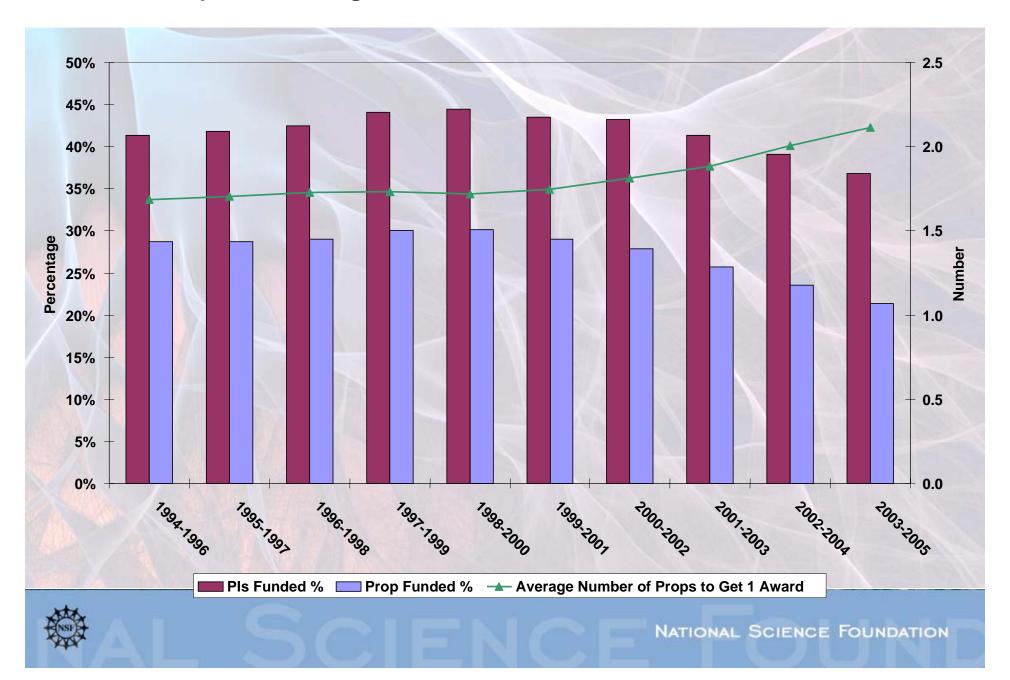


Research Grant Proposals by PI Type

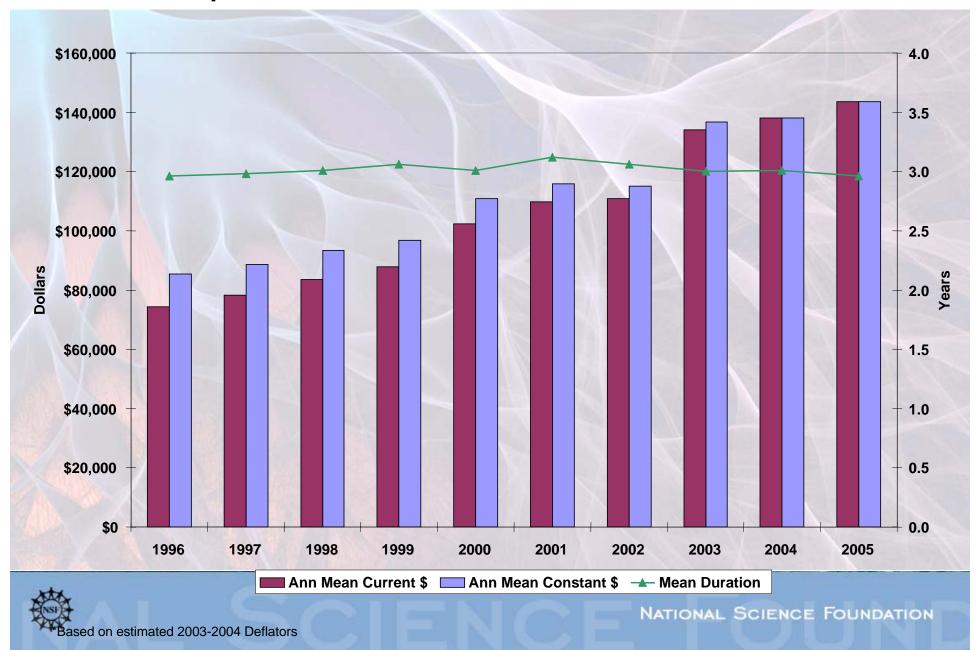




PI vs Proposal Funding Rate - Research Grants Based on 3 Year Intervals



NSF Competitive Award Size and Duration - Research Grants



Proposal and Award Policy & Procedural Update



Coverage

- → Upcoming Changes to the Grant Proposal Guide (GPG)
- → Recent Legislative Changes in the Consultant Rate of Pay Limitations
- → Project Reporting Tracking System
- → Please Remember.....



Upcoming Grant Proposal Guide (GPG) Revision

- → Grants.gov Implementation
 - NSF Grants.gov Implementation Guide
 - Waiver??
- → Proposal Deadline Issues
 - Hurricanes, Floods, etc.
 - System Integrity Issues
- Addition of the Title VI Assurance of Compliance
- → Cost Sharing Update
- → Facilities Proposals



Upcoming Grant Proposal Guide (GPG) Revision

- → Humans & Animals
- → Collapsing of Policy Documents
- → Proposal Checklist Update
 - Consistent with NSF Grants.gov Checklist



Consultant Rate of Pay Update

- → Appropriation Act applicable to NSF for Fiscal Year 2006 no longer specify a limitation on the amount of compensation that may be paid to a consultant under an NSF award
 - Previously was limited to the daily equivalent of the then current maximum rate paid to an Executive Schedule Level IV Federal employee (exclusive of indirect cost, travel, per diem, clerical services, fringe benefits and supplies.)
- Payments should be comparable to normal and customary fees charged by the consultant for comparable services



Consultant Rate of Pay Update (Cont'd)

- → NSF Terms and Conditions (Grant General Conditions (GC-1) and Cooperative Agreement Financial and Administrative Terms and Conditions (CA FATC) are currently being revised to implement this change:
 - All new grants, cooperative agreements and funding amendments to existing awards will begin referencing and will be subject to the new terms and conditions dated 03/15/06
 - Parallel change will be made to Federal Demonstration Partnership Operating Procedures (Appendix B, National Policy Requirements)
 - Funds awarded prior to incorporation of the revised conditions will still be subject to the consultant rate of pay limitation until all of those funds are expended



Consultant Rate of Pay Update (Cont'd)

- → Funds awarded prior to incorporation of the revised conditions will still be subject to the consultant rate of pay limitation until all of those funds are expended
- NSF will not amend awards to provide additional funds for increases in consultant rate of pay
- Awardees are authorized to transfer funds among budget categories to cover allowable expenditures. Prior NSF approval is not required for such actions
- → Frequently Asked Questions and a list of prior archived rates are available on the Policy Office website at: http://www.nsf.gov/bfa/dias/policy



Project Report Tracking System

- → System design process has been completed and development has commenced!!
- → Expected implementation date is Fall 2006.
- → Annual Project Reports (APR)
 - Standard grants, continuing grants, and cooperative agreements are required to file APRs.
 - All APRs are for 12-month periods, with the exception of the first report.

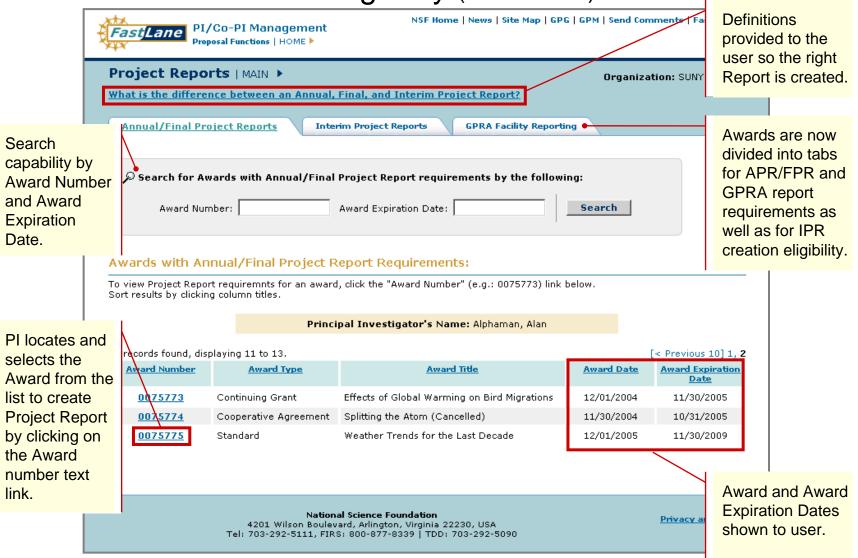


Project Report Tracking System (Cont'd)

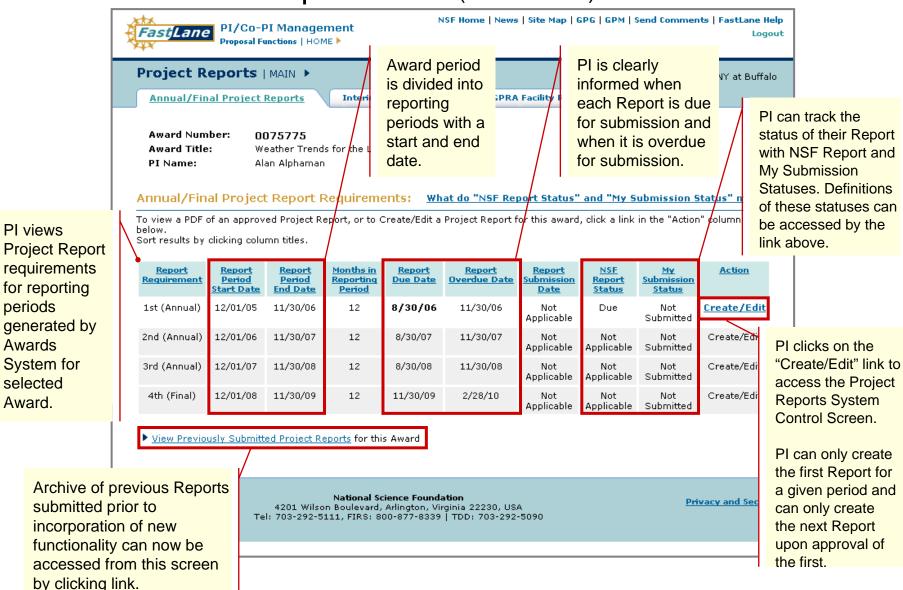
- → Final Project Reports (FPR)
 - Standard grants, continuing grants, cooperative agreements, and individual fellowships are required to file a FPR.
 - Requirement for submission of an FPR will be waived for awards expiring prior to May 1, 1999.



FastLane – View Awards by Report Requirements or Creation Eligibility (new screen)



FastLane – View Selected Award's Project Report Requirements (new screen)



Please Remember....

→ Cooperative agreements have added conditions due to substantial involvement of NSF. Be aware that there is generally more reporting and oversight required for a cooperative agreement than a grant, and there should be ongoing dialogue with the cognizant Program Officer to fully understand the conditions of this type of award.



Please Remember.... (Cont'd)

→ PI Transfers

- The award is made to the university; institution has the discretion of appointing a substitute PI.
- If willing to transfer the award to another university be sure to reconcile final expenditures and accurately determine what funds are to be transferred; NSF cannot intervene or redo a transfer after it is made. (We have had a lot of problems with the original institution retaining too much and then asking NSF to make another transfer, which we cannot do.)
- Consider making a subaward rather than transferring the whole award.



Please Remember.... (Cont'd)

- → Notifications and Requests -- be familiar with what needs prior approval so that timely requests and notifications can be made
 - GPM Exhibit III-1 has summary listing





Notifications & Requests | MAIN ▶

Organization: NSF

Forwarded by PI

Prepared by SPO

Submitted to NSF

Prepare a New Notification or Request for Award #: 9999999

Award Amount: \$7,000,000.00 **Expiration Date:** 10/01/2005

Division: DIVISION OF HUMAN RESOURCE DEVELOPMENT

Award Title: Test for Demo

Organization: NSF

PI/PD: Alphaman, Alan

Select the Notification or Request Type:

GRANTEE NOTIFICATION TYPES	Topic Guidance
O Anticipated Residual Funds in excess of \$5,000 or 5%	<u>GPM</u>
O Grantee Approved No Cost Extension	<u>GPG</u>
O Cost Sharing Equal To or Greater Than \$500,000	<u>GPM</u>
O Significant Changes/Delays or Events of Unusual Interest	<u>GPM</u>
O Conflicts of Interests	<u>GPM</u>
Significant Changes in Methods/Procedures	<u>GPM</u>
Short-Term Absence of the PI/PD (Up to Three Months)	<u>GPM</u>

GRANTEE REQUEST TYPES (Requires NSF Approval)	Topic Guidance
Addition of SubAward	<u>GPM</u>
O Withdrawal of PI/Co-PI	<u>GPM</u>
O Long-Term Absence of the PI/PD (Over Three Months)	<u>GPM</u>
NSF Approved No-Cost Extension	<u>GPG</u>
O PI Transfer	<u>GPM</u>
O Pre-award Costs in Excess of 90 Days	<u>GPM</u>
 Rearrangement/Alteration \$25,000 or over (Follow these links for more information on Non- FDP Organizations or FDP Organizations. They will open a PDF file in new window.) 	<u>GPМ</u>
Change of PI	<u>GPM</u>
Significant Change in Person-Months Devoted to Project	<u>GPM</u>
Changes in Objective or Scope	<u>GPM</u>
Reallocation of Funds Budgeted for Participant or Trainee Support Costs	<u>GPM</u>

^{*}Topic Guidance is provided through Grant Proposal Guide (GPG) and Grant Proposal Manual (GPM) references.

Prepare

Cancel

Please Remember.... (Cont'd)

→ Cost Sharing.....

- Although NSF cost sharing policy may have changed for new solicitations, cost share requirements incorporated into existing awards must still be met.
- If there is more than \$500K total cost share required over the life of an existing, then the AOR must submit an annual cost share certification on FastLane at the same time the Annual Report is provided by the PI.



Please Remember.... (Cont'd)

- → Compliance with Federal Regulations and U.S. Codes
 - GPM Exhibit I-1 highlights these requirements
- → Human Subjects & Vertebrate Animals
 - Stay tuned to upcoming changes in the NSF Grant Conditions



Electronic Initiatives Update



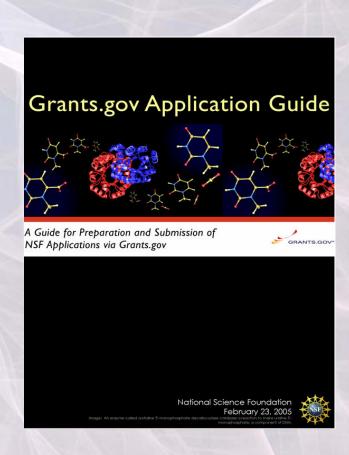
NSF's Grants.gov Transition Process

- → NSF's Grants.gov Proposal Integration provides a seamless process which:
 - Electronically downloads submitted application packages to NSF from Grants.gov and
 - Inserts the data into NSF's corporate database
- → Proposal submitted via Grants.gov will look the same as a proposal submitted via NSF's electronic proposal system to programs and reviewers



NSF Grants.gov Application Guide

- →Intended to serve as the primary document for use in preparation of NSF applications via Grants.gov
- →Includes step-by-step instructions for completion of each of the SF 424 (R&R) forms as well as the NSF specific forms
- → Provides specific instructions for inclusion and conversion of pdf files





Grants.gov Implementation

→ In FY 05, twenty-three funding opportunities were posted to Grants.gov "Apply" -- all were optional submission

Thirty-eight proposals were submitted to NSF using these opportunities



Implementation (Cont'd)

- → In FY 06, NSF will post 98 funding opportunities that will authorize or require use of Grants.gov:
 - 8 programs will require use of Grants.gov; and
 - 90 programs will authorize use of Grants.gov.
- → NSF's full implementation plan for FY 06 is available at:
 - http://www.nsf.gov/bfa/dias/policy/docs/grantsgova dvisory06.pdf
- → In FY 07, the goal is to include 100% of NSF funding opportunities in Grants.gov "Apply"



Implementation (Cont'd)

- → All collaborative proposals must be submitted via FastLane
 - By one organization (which include one or more subawards)
 - As separate submissions from multiple organizations.



Implementation (Cont'd)

- →NSF also does <u>not</u> accept applications through Grants.gov for:
 - Submission of Letters of Intent and Preliminary Proposals
 - Changed/Corrected Applications
 - Revisions
 - Continuations
 - Supplemental Funding Requests



Challenges

- → The SF 424 (R&R) has not yet been evaluated for use with:
 - NSF Fellowship Programs
 - Instrumentation Programs
 - Complex mechanisms such as Centers and Facilities



Please Remember!!

- → File attachments must be in pdf
- → Check the institutional names used!
- → Use the Checklist!
- → Read the Grants.gov Application Guide
- → Follow any special instruction in the funding opportunity
- → Allow extra time for editing!!!



Grants.gov Next Steps

- → Subaward capability will be available to the agencies and NSF will include the subaward form in the NSF application package by May 2006.
- → Separately submitted collaborative proposals are not included at this time.
- → Agency System to System Interface MIT and InfoEd are testing the entire end-to-end business process with NSF



Lines of Business Opportunities

- Common Solution
 - A business process and/or technology based shared service made available to government agencies.
- → Business Driven (vs. Technology Driven)
 - Solutions address distinct business improvements that directly impact LoB performance goals.
- → Developed Through Architectural Processes
 - Solutions are developed through a set of common and repeatable processes and tools.
- → Current LoBs
 - Financial Management (FMLoB)
 - Human Resources Management (HRLoB)
 - Grants Management (GMLoB)
 - Federal Health Architecture (FHALoB)
 - Case Management (CMLoB)
 - Budget Line of Business (BLoB)
 - Geospatial Line of Business (GLoB)
 - Information Security Line of Business (ISLoB)



Grants Management Line of Business (GMLoB)

- → Big dollars spread over many agencies/programs:
 - \$ 540 B
 - 26 agencies
 - > 900 programs
- → Significant spending on Grant Management systems. Fiscal Year 2006:
 - \$150 million Development Modernization and Enhancement
 - \$3.8 billion in Operations and Maintenance
- → Opportunities for increased efficiencies, improved oversight and management, and customer-centric focus



GMLoB – Vision & Goals

Vision	A government-wide solution to support end-to-end grants management activities that promote citizen access, customer service, and agency financial and technical stewardship.
Goals	→ Improve customer access to grant opportunities
	→ Increase efficiency of the submission process
	→ Improve decision making
	→ Integrate with Financial Management processes
	→ Improve the efficiency of the reporting procedures in order to increase the usable information content
	→ Optimize the post-award and closeout actions



GMLoB - Accomplishments

- → GMLoB operating model and approach
- → Common Grants Management process
- → Evaluation of Request for Information
- → Common solution white paper
- → Target architecture
- → Business case development



Consortia Approach

- → Align agency work teams into consortia
 - Shared business interests
 - Planning, leadership, business, and program direction
 - Goal to define a common technical solution to meet members' needs
- Build cross-agency collaboration
 - Helps eliminate the process and technical stovepipes
 - Establishes a community of grant making agencies working together as early as possible
 - Focus on the development of universal grant information data standards to be used by all granting agencies and the applicant and awardee community

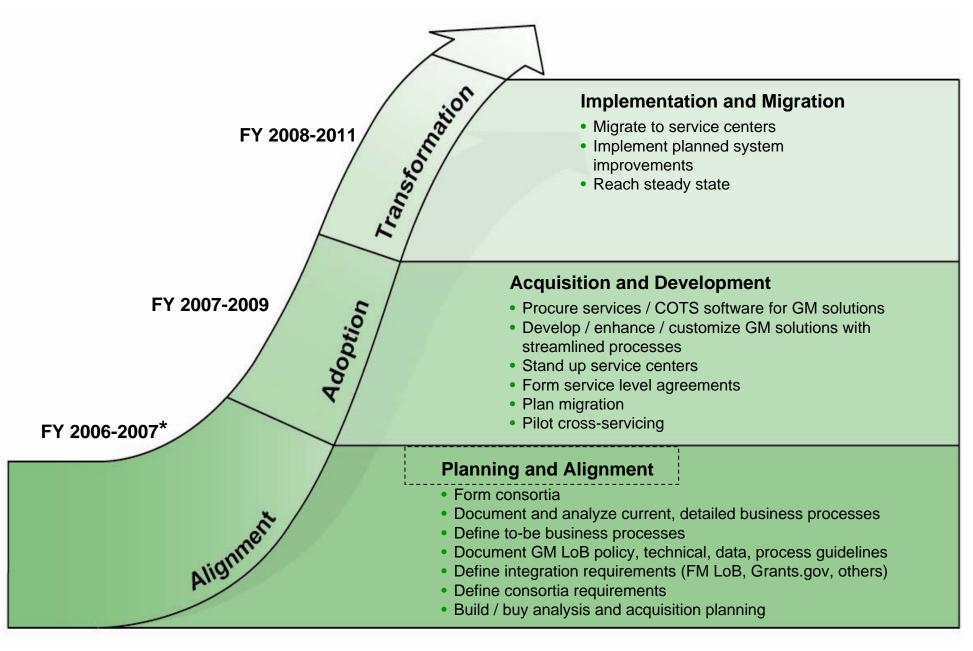


Consortia Selection

- → OMB named the following 3 initial Consortia Leads:
 - The Department of Education (DOEd)
 - The Department of Health and Human Services— Administration for Children and Families (HHS ACF)
 - The National Science Foundation (NSF)



GMLOB Milestones

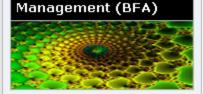


FUNDING | AWARDS

SEARCH	
NSF Web Site	٧
	Đ

ABOUT | FastLane

Office of Budget, Finance and Award



DIAS Home

CAAR Branch

Policy Office

Systems Office

View DIAS Staff

Search DIAS Staff



BFA Organization

Office of Budget, Finance, & Award Management

Budget Division

Division of Acquisition and Cooperative Support

Division of Financial Management

Division of Grants & Agreements

Division of Institution & Award Support

Policy Office

HEAD: Jean Feldman

Policy Office Overview:

The Policy Office is responsible for developing, implementing and issuing proposal and award policy for the programs of the National Science Foundation and is available to assist you with questions involving policy related issues. Questions related to specific awards should be directed to the <u>Division of Grants and Agreements</u>.

Grants & Cooperative Agreements:

NSF's Response to the Community Regarding Hurricane Katrina

DISCOVERIES | NEWS | PUBLICATIONS | STATISTICS |

- Policy & Guidance (including the Grant Proposal Guide (GPG), and Grant Policy Manual (GPM))
- Examples of Activities that Demonstrate Broader Impacts
- FAQs: Proposal Preparation and Award Administration
- FAQs: Payments to Consultants under NSF Awards
 - O Archived Consultant Rates
- FAQs regarding Electronic Signatures
- Revision of the NSF Cost Sharing Policy
- Grants.gov
 - NSF FY 2006 Grants.gov Implementation Strategy
 - Listing of FY 2006 NSF Programs Authorizing or Requiring Use of Grants.gov - March 3, 2006
 - O Grants.gov Application Guide January 6, 2006